

CLOSURE PLAN

CFR 257.102(b)

Fly ash pond

Amos Plant
Putnam County, West Virginia

October, 2017

Prepared for: Appalachian Power Company

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza

Columbus, OH 43215



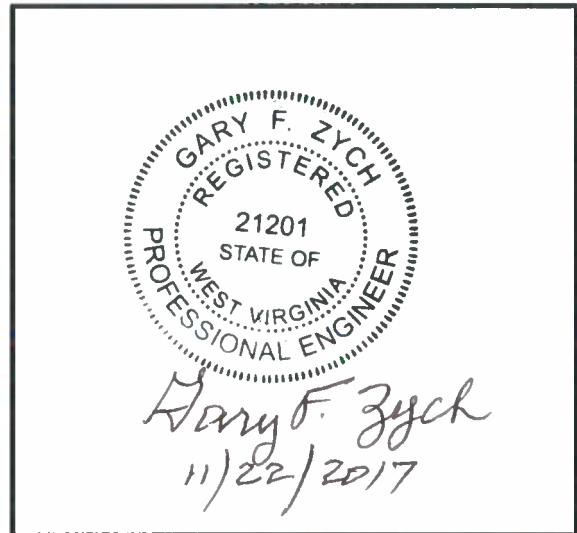
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CFR 257.102(b)
AMOS PLANT
FLY ASH POND

PREPARED BY *J. Massey-Norton* DATE *11/21/2017*
John Massey-Norton

REVIEWED BY *G.F. Zych For B. PALMER* DATE *11/22/2017*
Brian G. Palmer, P.E.

APPROVED BY *Gary F. Zych* DATE *11/22/2017*
Gary F. Zych, P.E.
Manager – AEP Geotechnical Engineering



I certify to the best of my knowledge, information, and belief that the information contained in this closure plan meets the requirements of 40 CFR § 257.102

CONTENTS

2.0 DESCRIPTION OF THE CCR UNIT.....	1
3.0 DESCRIPTION OF CLOSURE PLAN 257.102(b)(1)(i)	1
4.0 CLOSURE IN PLACE 257.102 (b)(1)(iii).....	1
4.1 CLOSURE PERFORMANCE STANDARDS 257.102 (d)(1).....	1
4.2 DRAINING AND STABILIZING OF THE SURFACE IMPOUNDMENT 257.102(d)(2).....	2
4.3 FINAL COVER SYSTEM 257.102 (d)(3).....	2
5.0 ESTIMATE OF MAXIMUM CCR VOLUME 257.102 (b)(1)(iv)	3
6.0 ESTIMATE OF LARGEST AREA OF CCR REQUIRING COVER 257.102 (b)(1)(v).....	3
7.0 CLOSURE SCHEDULE 257.102(b)(1)(vi)	3

1.0 OBJECTIVE

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of CFR 257.102(b) for Closure Plans of Inactive CCR Units.

2.0 DESCRIPTION OF THE CCR UNIT

The Amos Power Plant is located near the City of St. Albans, Putnam County, West Virginia. Appalachian Power Company is the owner of the plant. The facility operates a surface impoundment for the disposal of CCR materials.

The Fly Ash Pond dam is a cross valley dam on Scary Creek, a tributary to the Kanawha River. The dam is 220 feet high and has side slopes of 2.5 to 3H:1V on the upstream slope, and 2.0 to 2.5H:1V on the downstream slope.

3.0 DESCRIPTION OF CLOSURE PLAN 257.102(b)(1)(i)

[A narrative description of how the CCR unit will be closed in accordance with this section]

Closure of the Fly ash pond will be completed by leaving the CCR in place and installing a final cover system.

The existing CCR materials and/or subgrade fill will be graded to a minimum of 2% slope to promote positive drainage of the final cover system. The final cover system will be constructed over the subgrade surface. The cover system will be a geomembrane covered with 24 inch thick vegetated soil cover.

Prior to regrading of the CCR material, the free water within the impoundment will be drained.

4.0 CLOSURE IN PLACE 257.102 (b)(1)(iii)

[If closure of the CCR unit will be accomplished by leaving the CCR in place, a description of the final cover system, designed in accordance with paragraph(d) of this section, and the methods and procedures to be used to install the final cover. The closure plan must also discuss how the final cover system will achieve the performance standards specified in paragraph (d) of this section.]

The final cover system will consist of a flexible geomembrane that will have a permeability that is less than or equal to the permeability of the natural subsoils and is no greater than 1×10^{-5} cm/sec. The geomembrane will be installed directly over the prepared subgrade material. Over the geomembrane, 24 inches of soil cover will be placed that is capable of sustaining native plant growth. The final cover soil will be seeded and mulched to promote growth of a vegetative cover.

4.1 CLOSURE PERFORMANCE STANDARDS 257.102 (d)(1)

4.1.1 SECTION 257.102(d)(1)(i)

[Control, minimize or eliminate, the maximum extent possible extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere.]

The final cover system is designed to minimize surface infiltration into the closed pond area.

4.1.2 SECTION 257.102(d)(1)(ii)

[Preclude the probability of future impoundment of water, sediment, or slurry.]

The final surface area will be graded to a minimum slope of 2% to prevent the ponding of surface water runoff.

4.1.3 SECTION 257.102(d)(1)(iii)

[Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period.]

The final cover system will be gently graded with a minimum of 2% slope. The final configuration of the facility will meet the stability requirements to prevent the sloughing or movement of the final cover system during the closure and post-closure care period.

4.1.4 SECTION 257.102(d)(1)(iv)

[Minimize the need for further maintenance of the CCR unit.]

The facility will be vegetated to prevent erosion. Maintenance of the final cover system will include mowing.

4.1.5 SECTION 257.102(d)(1)(v)

[Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.]

The CCR unit will be closed in a timeframe consistent with recognized and generally accepted good engineering practices. See Section 7.0 for a detailed milestone schedule.

4.2 DRAINING AND STABILIZING OF THE SURFACE IMPOUNDMENT

257.102(d)(2)

All free-standing water will be removed before any excavation or filling operations for the subgrade surface.

4.3 FINAL COVER SYSTEM 257.102 (d)(3)

[If a CCR unit is closed by leaving CCR in place, the owner or operator must install a final cover system that is designed to minimize infiltration and erosion , and at a minimum, meets the requirements of paragraph (d)(3)(i) of this section, or the requirements of the alternative final cover system specified in paragraph (d)(3)(ii) of this section.

The final cover system must be designed and constructed to meet the criteria in paragraphs (d)(3)(i)(A) through (D) of this section. The design of the final cover system must be included in the written closure plan.]

The final cover system will be designed to meet the referenced criteria. The initial cover system will consist of a geomembrane cap and a 24-inch thick protective/vegetative soil cover.

5.0 ESTIMATE OF MAXIMUM CCR VOLUME 257.102 (b)(1)(iv)

[An estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit.]

The maximum CCR volume expected for this Fly ash pond is 9,111 acre-feet.

6.0 ESTIMATE OF LARGEST AREA OF CCR REQUIRING COVER 257.102 (b)(1)(v)

[An estimate of the largest area of CCR unit ever requiring a final cover]

The largest area of the CCR unit ever requiring a final cover at any time is 165 acres.

7.0 CLOSURE SCHEDULE 257.102(b)(1)(vi)

[A schedule for completing all activities necessary to satisfy the closure criteria in the section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps that will be taken to close the CCR unit, including identification of major milestones such as coordinating with and obtaining necessary approvals and permits from other agencies, the dewatering and stabilization phases of the CCR surface impoundment closure, or installation of the final cover system, and the estimated timeframes to complete each step or phase of the CCR unit closure.]

The closure schedule started in 2011 with a site investigation and engineering report. The closure report was filed with applications to the State of West Virginia Department of Environmental Protection to close the fly ash pond.

Approval was obtained and construction activities started in September 2013. The construction was substantially complete in June 2017 and a final construction report will be prepared by December 2017.